

"FEE ADDRESS" INDICATION FORM

To: MAIL STOP: M Fee Correspondence
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Please recognize as the "Fee Address," under the provisions of 37 CFR 1.363, the following address:

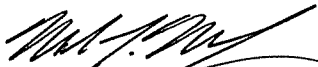
COMPUTER PATENT ANNUITIES, INC.
225 Reinekers Lane
Suite 400
Alexandria, VA 22314

Payor Number: 000197

in the following listed application(s) or patent(s) for which the issue fee has been paid.

<u>Patent No.</u>	<u>Serial No.</u>	<u>Patent Date</u>	<u>US Filing Date</u>	<u>Confirmation No.</u>	<u>Attorney Docket No.</u>
7,456,430 B1	09/544,801	11/25/2008	04/07/2000	1717	SEL 174

Respectfully Submitted,



Mark J. Murphy
Registration No. 34,225
Date: December 11, 2008

COOK ALEX Ltd.
200 West Adams Street
Suite 2850
Chicago, Illinois 60606
(312) 236-8500

Customer No: 26568



US007456430B1

(12) **United States Patent**
Yamazaki et al.

(10) **Patent No.:** **US 7,456,430 B1**
(45) **Date of Patent:** **Nov. 25, 2008**

(54) **SEMICONDUCTOR DEVICE AND METHOD FOR FABRICATING THE SAME**

5,671,027 A * 9/1997 Sasano et al. 349/46
5,734,185 A * 3/1998 Iguchi et al. 257/336
5,767,930 A * 6/1998 Kobayashi et al. 349/42

(75) Inventors: **Shunpei Yamazaki, Tokyo (JP); Jun Koyama, Kanagawa (JP); Toru Takayama, Kanagawa (JP); Toshiji Hamatani, Kanagawa (JP)**

(Continued)

(73) Assignee: **Semiconductor Energy Laboratory Co., Ltd. (JP)**

FOREIGN PATENT DOCUMENTS

CN 1123465 A 5/1996

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(Continued)

(21) Appl. No.: **09/544,801**

OTHER PUBLICATIONS

(22) Filed: **Apr. 7, 2000**

Schenk, H. et al, "Polymers for Light Emitting Diodes," *EuroDisplay '99, Proceedings of the 19th International Display Research Conference*, Berlin, Germany, Sep. 6-9, 1999, pp. 33-37.

(30) **Foreign Application Priority Data**

(Continued)

Apr. 12, 1999 (JP) 11-104646

(51) **Int. Cl.**
H01L 29/04 (2006.01)

Primary Examiner—Sue A. Purvis
Assistant Examiner—Fazli Erdem
(74) *Attorney, Agent, or Firm*—Cook Alex Ltd.

(52) **U.S. Cl.** **257/72; 257/59; 257/347; 257/350; 257/351; 257/344; 257/E27.111; 257/E29.275; 257/E29.278**

(58) **Field of Classification Search** **257/72, 257/350, 59, 366, 365, 66, 344, 347, 351, 257/E27.111, E29.274, E29.278, E29.293; 349/41, 42, 46**

See application file for complete search history.

(57) **ABSTRACT**

(56) **References Cited**

The invention primarily provides gate electrodes and gate wirings permitting large-sized screens for active matrix-type display devices, wherein, in order to achieve this object, the construction of the invention is a semiconductor device having, on the same substrate, a pixel TFT provided in a display region and a driver circuit TFT provided around the display region, wherein the gate electrodes of the pixel TFT and the driver circuit TFT are formed from a first conductive layer, the gate electrodes are in electrical contact through connectors with gate wirings formed from a second conductive layer, and the connectors are provided outside the channel-forming regions of the pixel TFT and the driver circuit TFT.

U.S. PATENT DOCUMENTS

- 5,153,690 A * 10/1992 Tsukada et al. 357/23.7
- 5,245,207 A 9/1993 Mikoshiba et al.
- 5,247,190 A 9/1993 Friend et al. 257/40
- 5,266,825 A * 11/1993 Tsukada et al. 257/366
- 5,343,063 A * 8/1994 Yuan et al. 257/317
- 5,399,502 A 3/1995 Friend et al. 437/1
- 5,402,254 A * 3/1995 Sasano et al. 359/59
- 5,594,569 A 1/1997 Konuma et al.
- 5,643,826 A 7/1997 Ohtani et al. 437/88

36 Claims, 23 Drawing Sheets

